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PSC Request 12

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EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 12

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 12. Describe the type of purification system for the produced gas.

Response 12. Detailed design and final selection of the syngas purification system will occur in the early stages of engineering and construction after project financing. Major components of this system would typically include sulfur removal and recovery in excess of 99% as well as other conventional processing steps to prepare the syngas for use as a fuel.

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EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 13

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 13. What is the estimated gas yield in Btu's gas per unit weight of coal and unit weight of solid waste?

Response 13. Syngas production is not normally measured relative to components, but rather of briquette feed. However, if one assumes a 50/50 blend of Coal/RDF the briquette will have a heating value (HHV) of approximately 10,000 Btu/lb of briquette feed. The BGL gasifier has a conversion efficiency of approximately 92%. Therefore, syngas yield will be approximately 9200 Btu/lb of briquette feed.

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EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 14

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 14. What is the estimated annual operating cost of the plant?

Response 14. Annual Operating Expenses for fuel and other consumables will be governed by final contracts for those materials. Specific Operating Expenses for the Integrated Gasification Combined Cycle (IGCC) facility are business confidential and therefore not available.

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EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 15

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 15. Explain the type of process that will be used for coal gasification.

Response 15. BGL gasification is oxygen blown, fixed bed slagging technology operating at approximately 350 psig. Each of the four planned refractory lined reactors have an internal diameter of 12 feet, are water jacket cooled and have reaction zone temperatures at a nominal 3200°F. Briquettes are fed through a lock-hopper at the top and descend by gravity in countercurrent flow to the rising syngas. The syngas, therefore, causes the vaporization of moisture and volatilization of light hydrocarbons from the briquettes. Instead of ash going to landfill disposal from a conventional coal power plant, the ash content of fuel briquettes is produced as solid inert vitrified frit from the bottom of the gasifier through a quench and lock-hopper. Vitrified frit, also known as synthetic aggregate, is inert, non-leaching and viable for sale as road paving material.

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PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 16

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 16. Provide the operating manual, if available.

Response 16. An operating manual for the plant, consisting of a library of volumes, will be developed after detailed design and during construction.

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PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 17

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 17. What is the gasification media (e.g., air, oxygen, steam)?

Response 17. Gasification media consists of oxygen and steam.

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PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 18

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 18. What is the estimated cost of the synthetic gas per million Btu?

Response 18. Kentucky Pioneer Energy intends to deliver synthesis gas to the combustion turbines at a unit cost lower than natural gas.

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PSC CASE NO. 2000-079

INFORMATION REQUEST RESPONSE

PUBLIC SERVICE COMMISSION REQUEST DATED 6/1/00

REQUEST 19

RESPONSIBLE PERSON: Dwight Lockwood

COMPANY: Kentucky Pioneer Energy
(responding for East Kentucky Power Cooperative)

Request 19. If the proposed combustion turbine is operated exclusively on natural gas, what is the maximum gas consumption per hour and what is the maximum quantity of gas per hour available at the site for this combustion turbine?

Response 19. The combustion turbines will normally be operated at base load. Heat input of each combustion turbine is approximately 1700 million Btu/hour. Five interstate pipelines are in the general vicinity of the project site, with at least one crossing the property. Adequate supplies are seen to be available.

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY POWER)
COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC)
CONVENIENCE AND NECESSITY, AND A CERTIFICATE)
OF ENVIRONMENTAL COMPATIBILITY, FOR THE)
CONSTRUCTION OF A 250 MW COAL-FIRED)
GENERATING UNIT (WITH A CIRCULATING FLUID BED) CASE NO.
BOILER) AT THE HUGH L. SPURLOCK POWER STATION) 2001-053
AND RELATED TRANSMISSION FACILITIES, LOCATED IN)
MASON COUNTY, KENTUCKY, TO BE CONSTRUCTED)
ONLY IN THE EVENT THAT THE KENTUCKY PIONEER)
ENERGY POWER PURCHASE AGREEMENT IS)
TERMINATED)

ORDER

East Kentucky Power Cooperative, Inc. ("East Kentucky") filed its application on March 9, 2001 for a Certificate of Public Convenience and Necessity and a Certificate of Environmental Compatibility to construct a 250 MW coal-fired generating unit, referred to as "Gilbert," at the Hugh L. Spurlock power station ("Spurlock") and related transmission facilities in Mason County, Kentucky. The Gilbert unit was to be constructed only in the event that East Kentucky's prior agreement to purchase the output of a 540 MW generating unit proposed by the Kentucky Pioneer Energy, L.L.C. ("KPE") is terminated. The Attorney General's Office ("AG") and the Kentucky Natural Resources and Environmental Protection Cabinet, Department of Natural Resources, Division of Energy ("DOE") were granted intervention and a hearing was held on August 18, 2001.

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On July 11, 2001, East Kentucky amended its application to eliminate the contingent nature of its request because KPE had not met its financial closing deadline of June 30, 2001. The amended application also revised Gilbert's output from 250 MW to 268 MW. East Kentucky has not terminated the power purchase agreement because the power will be sold at a very reasonable price and KPE has indicated that it believes it can obtain project financing by March 2002. However, due to the delay in KPE's financing, East Kentucky decided that it cannot reasonably rely on that project to satisfy its future power supply needs. Therefore, East Kentucky has concluded that it should proceed to build the Gilbert unit. In the event that KPE is able to secure project financing, East Kentucky stated that certain provisions in the existing purchase power agreement would have to be revised and any renegotiated contract will be resubmitted to the Commission for its prior approval.

East Kentucky submitted to the Natural Resources and Environmental Protection Cabinet ("Natural Resources Cabinet") a statement of environmental compatibility for the proposed Gilbert unit. By letter dated May 23, 2001, the Natural Resources Cabinet reported that East Kentucky's proposed Gilbert plant will be environmentally compatible.

East Kentucky determined that additional power will be needed to meet its future load requirements and it issued a request for proposal to utilities and power marketers on January 11, 2001. Several responses were received, but East Kentucky's analysis shows that the proposed Gilbert unit will have the lowest cost. Additional analyses were performed in response to the request of the AG. One of those analyses shows that adding one 93 MW combined cycle unit in April 2004 and waiting for the KPE project to develop will cost \$114 million less than adding the Gilbert unit now and then relying on

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the KPE development. East Kentucky rejected this scenario, claiming that it should not place all of its new base load requirements at market risk, contingent on the development of the KPE project as a commercially viable plant.

The AG recommends that East Kentucky's request to construct the Gilbert unit be granted. However, if KPE achieves financial closure by the summer of 2002, the AG suggests that the Commission and the parties explore cancellation of the Gilbert unit. DOE recommends that East Kentucky should complete a full and comprehensive study of the technical potential of demand-side resources and distributed generation in its service territory before proceeding to construct any new generation.

Based on East Kentucky's supply analyses, the uncertainty of the KPE project, and East Kentucky's need for additional power, the Commission finds that the construction of the Gilbert unit should be approved. Further, the Commission finds that when the KPE project achieves financial closure, East Kentucky should refile the power purchase agreement for review and approval by the Commission. The filing should include an analysis of the feasibility of the cancellation of the Gilbert unit and the substitution of a 93 MW combined cycle unit. In addition, the Commission finds that East Kentucky should continue to review the feasibility of demand side resources and provide a detailed analysis of its review in future filings related to generating capacity.

The Gilbert unit has the ability to burn not only coal but also wood waste and other biomass products due to the nature of a circulating fluid bed boiler. East Kentucky did not propose to include as part of the initial construction the handling facilities necessary to burn any of these other products. The AG recommended that the wood waste handling facilities be included in the unit design and that wood waste be

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considered as one of the primary fuels. East Kentucky acknowledged that the wood waste handling facilities would cost \$2.5 to \$3 million and have a relatively short payback. Due to the potential cost savings over time from burning biomass, the Commission finds that East Kentucky should conduct a detailed analysis of fueling the Gilbert unit with wood waste and other biomass products.

East Kentucky indicated that additional transmission facilities would be needed to maintain stability of the unit at the Spurlock station. A transmission line will be needed to connect to transmission facilities owned by Cinergy Corp. East Kentucky indicated that certain agreements are necessary between the utilities, and additional time will be needed to finalize those agreements. Because of the potential delay in finalizing the transmission agreements, East Kentucky proposed to delete the transmission portion of its application and proceed only with the proposed generating facilities. The Commission finds East Kentucky's proposal to be reasonable.

IT IS THEREFORE ORDERED that:

1. East Kentucky is granted a Certificate of Public Convenience and Necessity and a Certificate of Environmental Compatibility to construct the Gilbert unit, a 268 MW coal-fired generating unit with a circulating fluid bed boiler, at the Spurlock station at an estimated cost of \$367 million.
2. East Kentucky shall conduct a detailed analysis of the benefits of fueling with wood waste and other biomass products and file that analysis upon completion.
3. East Kentucky's request to delete from consideration at this time the construction of needed transmission facilities is granted. Within 30 days of completing all analyses, including the selection of a final route for the transmission facilities and the